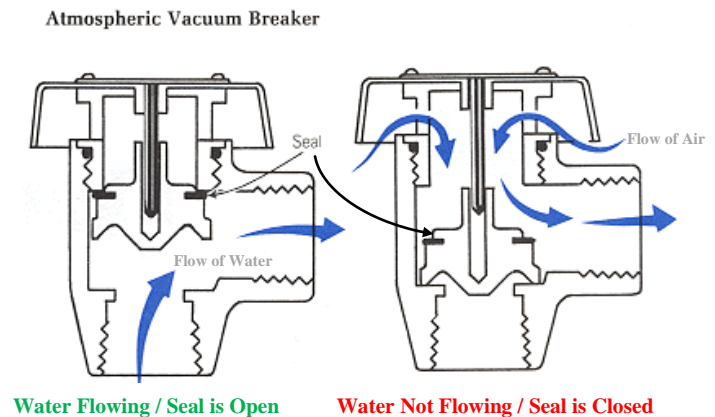




# ATMOSPHERIC VACUUM BREAKERS

## What is an Atmospheric Vacuum Breaker?

An Atmospheric Vacuum Breaker (AVB) is a backflow prevention device that incorporates an atmospheric vent with a check valve to prevent backsiphonage (reversal of the normal flow of water caused by a negative pressure in the supply piping) of non-potable liquids into the potable water supply. Its operation depends on a supply of potable water to seal off the atmospheric vent, allowing the water to flow downstream. If a negative pressure develops in the supply line, the loss of pressure permits the check valve to drop, sealing the supply opening; while at the same time the vent opens, admitting air to the system to break the vacuum.



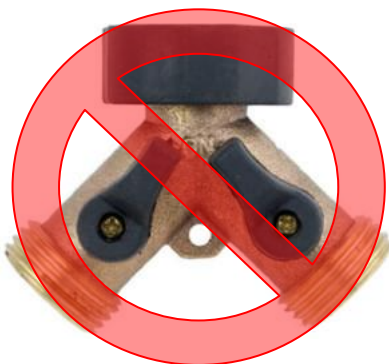
## What Causes Backsiphonage?

Backsiphonage can be created when there is a stoppage of the water supply due to nearby fire-fighting, repairs or breaks in the city main, etc. The effect is similar to the drinking of soda by inhaling through a straw, which induces a flow in the opposite direction.

## Will an Atmospheric Vacuum Breaker Prevent Backsiphonage when used Under Continuous Pressure?

**Absolutely NOT!** "Continuous Pressure" occurs when pressure is being supplied continuously to a backflow preventer for periods of over 12 hours at a time. An AVB should never be subjected to continuous pressure as the device could become stuck open, or "frozen", and not function under an emergency condition.

## Can Y-Splitters be used on Faucets with Atmospheric Vacuum Breakers?



**No.** Y-Splitters (wyes) create a continuous pressure situation on the AVB. Similar devices, such as an attached hose with a spray nozzle or a wall mounted chemical dispenser, also create continuous pressure. Both the Kansas Food Code and City Ordinance<sup>†</sup> prohibit the use of devices that place AVBs under continuous pressure; since if the AVB became frozen and unable to function under an emergency condition, backsiphonage of non-potable water and other liquids could occur, allowing the potable water supply to become contaminated.



# ATMOSPHERIC VACUUM BREAKERS (continued)

## I Currently Use a Y-Splitter on My Faucet with an Atmospheric Vacuum Breaker to Supply a Wall Mounted Chemical Dispenser. What Can I Do to Comply with the Food Code and City Ordinance?

The **best option** is to install a dedicated water line directly to your wall mounted chemical dispenser. New food service establishments and existing food service establishments that are remodeling are required to have a dedicated water line before plans and a license will be approved.

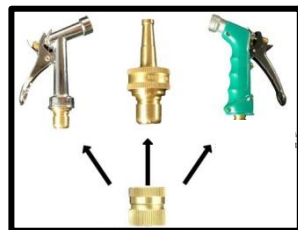


Wall Mounted Chemical Dispenser Supply Line Connected to a Vented-T on a Faucet with an AVB.

Existing food service establishments that are not remodeling may install a Vented-T (tee) or a Pressure Indicating Tee to the existing faucet to supply the wall mounted chemical dispenser. A Vented-T or Pressure Indicating Tee allows for the continuous flow of water when the faucet handles are open. Unlike Y-Splitters, which have valves to stop the flow of water when the faucet handles are open, creating continuous pressure on the AVB, Vented-Ts and Pressure Indicating Tees have no valves. The only way to stop the flow of water is to turn the faucet handles off, which allows the AVB to function properly.

## I Currently Attach a Hose with Spray Nozzle to My Faucet with an Atmospheric Vacuum Breaker. What Can I Do to Comply with the Food Code and City Ordinance?

The **best option** is to screw the hose onto the faucet when the spray nozzle is needed and to unscrew the hose from the faucet when your task is completed. Even if you turn the flow of water off using the faucet handles, the spray nozzle acts as a valve, keeping water in the hose; this water puts continuous pressure on the AVB and keeps it from functioning properly.



Using a Quick Connect System to attach your hose to the faucet and/or your spray nozzle to the hose is allowed to make it easier on employees and increase the likelihood that the hose and spray nozzle will not remain connected, placing the AVB under continuous pressure.



<sup>†</sup> See Chapter 21.12 of the Wichita, Kansas Code of Ordinance & Chapter 5 § 5-203.14 of the 2005 Kansas Food Code.